

### CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of controlling the relationship between a primary surface and a reference surface in a probe card analysis system; said method comprising:

defining said reference surface at a selected point on a metrology frame;  
attaching ~~at least three plurality of~~ linear actuators rigidly to said metrology frame such that the at least three linear actuators are parallel but not in the same plane;  
coupling a platform supporting said primary surface to each of said ~~plurality of~~ at least three linear actuators; and  
controlling the relationship between said primary surface and said reference surface utilizing said ~~plurality of~~ at least three linear actuators with feedback from the at least three linear linear actuators.

2. (Currently Amended) The method of claim 1 wherein said coupling comprises utilizing a flexural assembly between said platform and each of said ~~plurality of~~ at least three of linear actuators.

3. (Currently Amended) The method of claim 1 wherein said controlling comprises driving each of said ~~plurality of~~ at least three linear actuators in unison.

4. (Currently Amended) The method of claim 1 wherein said controlling comprises driving one of said ~~plurality of~~ at least three linear actuators independently.

5. (Original Claim) The method of claim 4 wherein said controlling comprises dynamically controlling an angular orientation between said primary surface and said reference surface.

6. (Original Claim) The method of claim 4 wherein said controlling comprises dynamically compensating for changes in shape of structural elements of said probe card analysis system.

7. (Original Claim) The method of claim 1 wherein said controlling comprises determining a distance between said primary surface and said reference surface at one or more selected locations on said platform.

8. (Original Claim) The method of claim 7 wherein said determining comprises utilizing a linear encoder at said one or more selected locations.

9. (Currently Amended) The method of claim 8 wherein said controlling further comprises feeding distance information back to said ~~plurality of~~ at least three linear actuators responsive to said determining.

10. (Currently Amended) A metrology system comprising:

a metrology frame having one or more vertical structural members;

~~a plurality of~~ at least three linear actuators attached to said frame such that the at least three linear actuators are parallel but not in the same plane; and

a platform supporting a primary surface; said platform coupled to each of said ~~plurality of~~ at least three linear actuators with feedback from the at least three linear linear actuators.

11. (Currently Amended) The metrology system of claim 10 further comprising:

a respective flexural assembly attached to each of said ~~plurality of~~ at least three linear actuators and coupling a respective linear actuator to said platform.

12. (Currently Amended) The metrology system of claim 11 wherein each said respective flexural assembly is operative to minimize lateral cross-coupling between said ~~plurality of~~ at least three linear actuators.

13. (Currently Amended) The metrology system of claim 10 further comprising a respective linear encoder associated with each of said ~~plurality of~~ at least three linear actuators.

14. (Original Claim) The metrology system of claim 13 wherein each respective linear encoder is operative to acquire distance information representing a distance between said primary surface and a reference surface at a selected location on said platform.

15. (Currently Amended) The metrology system of claim 14 wherein each of said ~~plurality of~~ at least three linear actuators is driven in unison responsive to said distance information.

16. (Currently Amended) The metrology system of claim 14 wherein one of said ~~plurality of~~ at least three linear actuators is driven independently responsive to said distance information.

17. (Currently Amended) The metrology system of claim 10 wherein each of said ~~plurality of~~ at least three linear actuators is attached to a respective one of said one or more vertical structural members.